CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.12/KRIDL/GSB-1/GR/2014-15

Date : 12.02.2016

GRADATION FOR GSB-I (CLOSE GRADED)
IS: 2720 (Part 4)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of work : Asphalting to cross and main roads at Abbigere Karikallu area in ward No.12 of Shettyhalli Sub division, BBMP, Bangalore.

Reference : AEE/SSD/PR/QC/163/2015-16 dated: 10.02.2016

Date of Testing : 12.02.2016

Sample Source : GSB Mix Plant Bangalore.

Oven Dry Wt (gm) : 8610

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75.0	0	0	0.00	100	100
53.0	185	185	2.15	97.85	80-100
26.50	2550	2735	31.77	68.23	55-90
9.50	1290	4025	46.75	53.25	35-65
4.75	1020	5045	58.59	41.41	25-55
2.36	985	6030	70.03	29.97	20-40
0.425	980	7010	81.42	18.58	10-25
0.075	900	7910	91.87	8.13	3-10
PAN	700				
Total	8610				

Civil-Tech Consultants & Engineers Bangalore

Remarks: Satisfies MORTH Specifications as per Table 400-1, Grading I

Note:

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Job No.: CTCE/BBMP/W.No.12/KRIDL/GSB-1/AL/2015-16

Date : 12.02.2016

ATTERBERG LIMITS TEST FOR GSB (CLOSE GRADED)
IS : 2720 (Part - 5)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of work : Asphalting to cross and main roads at Abbigere Karikallu area in ward No.12 of Shettyhalli Sub division, BBMP, Bangalore.

Reference : AEE/SSD/PR/QC/163/2015-16 dated: 10.02.2016

Date of Testing : 12.02.2016

As per MORTH Table : 400-11

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	23.00	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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18.02.2016

Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/Gradation/2015-16

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Asphalting to cross and main roads at Abbigere Karikallu area in ward No.12 of Shettyhalli Sub division, BBMP, Bangalore.

Reference : AEE/SSD/PR/QC/163/2015-16 dated: 10.02.2016

Date of Testing : 18.02.2016

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 8440

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	185	185	2.2	97.8	95-100
22.4	2650	2835	33.6	66.4	60-80
11.2	1525	4360	51.7	48.3	40-60
4.75	1050	5410	64.1	35.9	25-40
2.36	980	6390	75.7	24.3	15-30
0.600	900	7290	86.4	13.6	8-22
0.075	650	7940	94.1	5.9	0-8

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Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/AIV/2014-15 18.02.2016

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Asphalting to cross and main roads at Abbigere Karikallu area in ward No.12 of Shettyhalli Sub division, BBMP, Bangalore.
Reference	AEE/SSD/PR/QC/163/2015-16 dated: 10.02.2016
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	18.02.2016

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	392	398	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	83	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	310	315	
4	Aggregate Impact value = percent fines	20.92	20.85	
	100* (W_2/W_1)%			21.15

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/S-T/2015-16 18.02.2016

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of Work	Asphalting to cross and main roads at Abbigere Karikallu area in ward No.12 of Shettyhalli Sub division, BBMP, Bangalore.
Reference	AEE/SSD/PR/QC/163/2015-16 dated: 10.02.2016
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	18.02.2016

Result : Flakiness Index = **11.05%**

Elongation Index = **13.28%**

Result : Combined Flakiness & Elongation index **24.33%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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